

## Eurydice akiyamai sp. nov., a new isopod crustacean from an estuary in Chiba Prefecture central Japan

journal or	Bulletin of the Toyama Science Museum
publication title	
number	3
page range	7-11
year	1981-03-20
URL	http://repo.tsm.toyama.toyama.jp/?action=repos
	itory_uri&item_id=17

# Eurydice akiyamai sp. nov., a New Isopod Crustacean from an Estuary in Chiba Prefecture, Central Japan\*

Noboru Nunomura
Toyama Science Museum

千葉県一宮川河口から発見された Eurydice 属(甲穀類; 等脚目)の一新種

布村 昇 富山市科学文化センター

千葉県長生郡長生村一宮川河口から採集されたスナホリムシを新種 Eurydice akiyamai (和名, ヒガタスナホリムシ) として記載した。本種はわが国における Eurydice 属の最初の報告である。本種は北米カリフォルニアから報告されている E. branchurops に最も類似するが、(1)よりずんぐりした体形、(2) 腹尾節の棘が 1 対しかないこと、(3) 第 2 触角の最初の 2 節に直交しないこと、(4) 目が小さいこと、(5) 胸部基板先端があまり鋭くないことなどによって区別される。

Recently I had a good chance to examine the isopod specimens collected from the estuary of Ichinomiya River, Chôsei-mura, Chiba Prefecutre, Central Japan by Dr.Akio Akiyama of the Tôhô University. At closer examinations, these specimens proved to represent a new species of the genus *Eurydice*. As far as I am aware, 25 species of the genus have hitherto been recorded as valid in the world, but none has been recorded in Japan. The above specimens, fixed with formalin and slightly dyed by methyleneblue, and later preserved in alcohol, were dissected and observed in glycerol. All the figures were drawn by using camera lucida.

Before going further, I wish to express my sincere gratitude to Dr.Saburo Nishimura of the Kyoto University for reading the manuscript, to Dr.Akio Akiyama of the Tôhô University for offering me such a good chance to study these specimens, and to Mr. Keiji Wada of the Seto Marine Biological Laboratory of the Kyoto University for preparing me some copies of the references inaccessible to me.

### Eurydice akiyamai, sp. nov.,

(Japanese name: Higata-sunahorimushi) (Figures 1 and 2)

<sup>\*</sup>Contributions from the Toyama Science Museum No. 11.



Fig. 1. Eurydice akiyamai sp. nov.,

A. Dorsal view; B. First peraeopod; C. Third peraeopod; D. Fourth peraeopod; E. Sixth peraeopod; F. Seventh peraeopod; G. Lateral view of epimera of peraeonal somites; H. Posterior part of pleotelson. (A-H: holotype).

126) at the Toyama Science Museum, 3 paratypes (OMNH-Ar-2505  $\sim$  2507) at the Osaka Museum of Natural History, 2 paratypes (NSMT-Cr-7294  $\sim$  7295) at the National Science Museum, Tokyo.

Description: Body oval and 2.4 times as long as wide. Body surface smooth and pale yellow in color. Eyes mediocre with about 20 ocelli. First antenna with eight segments; four peduncular segments are long and four flagellar segments are short; first and second peduncular

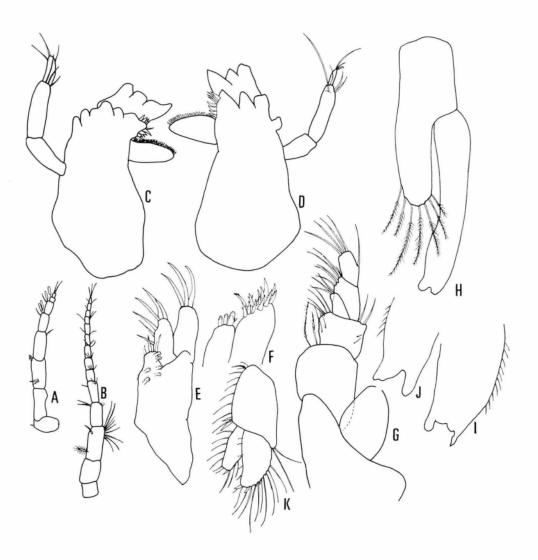


Fig. 2. Eurydice akiyamai sp. nov.,

A. First antenna; B. Second antenna; C, Left mandible; D. Right mandible; E. Second maxilla; F. First maxilla; G. Maxilliped; H. Male second pleopod; I and J. Apical part of the same; K. Uropod. (A-G: holotype, H  $\sim$  I and K: allotype, J: paratype male).

#### Noboru Nunomura

segments are perpendicular to each other. Second antenna is a little longer than the first; first segment short; second segment a little longer than the first; third segment rectangular with a plumose seta at inner margin; flagellum consists of 10 segments.

Mandible with three-segmented palp; first segment without seta; second segment with three to four setae at distal part; terminal segment with three setae at the tip; pars incisiva is very well produced, bearing three sclerotinized teeth; above the pars incisiva, lies lacina mobilis consisting of four teeth, the outer one with a row of eight recurved teeth, pars molaris is represented by a thin flexible leaf-shaped flap of chitin, bearing a row of 33-36 small round spines along its inner edge. First maxilla consists of two endites; outer endite with about 12 sharp recurved spines, some of which are toothed; inner endite possesses three haired setae. Second maxilla is smaller than the first; palp with three simple setae at its apex; outer endite is crowned with six setae. Maxilliped big with five-segmented palp; first segment stout with two plumose setae on inner distal border; second segment square with several simple setae; third segment small and triangular; fourth segment with seven to eight simple setae; terminal segment with four simple setae at the apex and a seta on outer border.

First to third peraeopods short; basis oblong; ischium triangular with a few setae; carpus short and small; propodus short. Fourth to seventh peraeopods longer than the first three segments; basis oblong with a seta at distal end; ischium oblong with several spines on inner margin; merus and carpus rectangular and with a few spines on inner margin and a few spines at distal corner; propodus longer than those of the first three peraeopods; dactylus longer than those of the first three peraeopods.

Stylus of male second pleopod is pretty long and wide, its apex is concaved. Uropod directed a little backward beyond the telson; basis rectangular with two spines at distal outer corner; endopod with a serrate outer margin bearing about four to five stout spines; exopod shorter than the endopod. Telson cordate in shape and with posterior and bearing a pair of small spines and about three pairs of long setae.

Remarks: The present new species is very closely allied to Eurydice branchurops Menzies and Barnard from California, North America. The former is separated, however, from the latter in the following features: (1) wider body shape, (2) less numerous denticles on pleotelson, (3) straight basal part of second antenna, (4) smaller eyes, (5) blunt epimera, and (6) more numerous segmentation of first antenna and less numerous segmentation of second antenna.

## References

Bačescu, M. 1948. Les représentants du genre Eurydice (Crustacés Isopodes) dans la Mer Noire. Natat. Biol. Buc., 6: 108-122.

Barnard, K. H. 1925. Contribution to the Crustacean Fauna of South Africa No, 9. Further additions to the List of Isopoda. Ann. S. Afr. Mus., 20:381-412.

Bruce, N. L. and D. A. Jones, 1978. The systematics of some Red Sea Isopoda(Family Ciro-

## A new Species of Eurydice from Chiba

- lanidae) with descriptions of two new species. J. zool. Lond., 185: 395-413.
- HALE, H. M. 1925. Review of Australian Isopods of the Cymothoid group. Pt. 1 Trans. R. Soc. S. Aust., 49: 125-185.
- Hansen, H.J. 1890. Cirolanidae et Familiae nouvellae propinque Musei Hauniensis. K.danske Vidensk selek. Skr., 5(3): 239-426. (Not seen by me).
- ———, 1905. Revision of the European marine forms of the Cirolanidae, a sub-family of crustacea Isopoda. J. Linn. Soc. London, 29: 337-373. Tab. 33-35.
- Jones, D. A. 1968. The functional morphology of the digestive system in the carnivorous intertidal isopod *Eurydice*. Zool. Lond., 156: 363-370.
- ———, 1969. The genus *Eurydice*(Crustacea:Isopoda) in the Aegean Sea, including *E.longispina* sp. nov., Cah. Biol. Mar., 10:15-29.
- ———, 1971. The systematics of some sand beach isopods (Crustacea: Eurydicidae) from the coast of Keniya. J. Zool. Lond., 165: 201-227.
- ———, 1974. The systematics and ecology of some sand beach isopods (Family Cirolanidae) from the coast of Saudi Arabia. Crustaceana, 26(2): 201-211.
- Menzies, R. J. and J. L. Barnard, 1959. Marine isopoda on coastal shelf bottom of South California. Systematics and ecology. Pacific Naturalist 1 (11/12): 3-35.
- Soika, G. A. 1955. Éthologie, écologie, systématique et biologéografie des *Eurydice* s. str. Vie et Milieu, 6(1): 38-52.